



09/746,557

PATENT

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|-------------|----------------------------------------------------------------------------|----------------------|
| Applicant:  | Forrest Rhoads et al.                                                      | Examiner:            |
| Serial No.: | 09/746,557                                                                 | Group Art Unit: 2171 |
| Filed:      | December 22, 2000                                                          | Docket: 962.011US2   |
| Title:      | SYSTEM AND METHOD FOR PROCESSING FORMATTED TEXT<br>DOCUMENTS IN A DATABASE |                      |

SUPPLEMENTAL PRELIMINARY AMENDMENT

Commissioner for Patents  
Washington, D.C. 20231

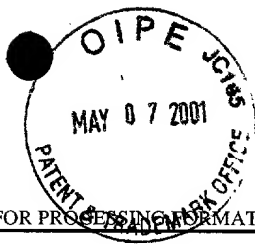
Before taking up the above-identified application for examination, please enter the following amendments:

IN THE CLAIMS

Please substitute claims 4, 28, and 29 listed in the appendix entitled Clean Version of Amended Claims for the previously pending version of these claims. Specific amendments to these claims are detailed in the following marked up versions:

**Marked Up Version of Amended Claims**

4. (Amended) The system of Claim 3 further [comprises] comprising means for identifying a quotation which is candidate for being associated with a citation in the textual document, and means for verifying a source document for each candidate quotation in the textual document to generate verified quotation information.
28. (Amended) The method of Claim 17, wherein said formatted text identification comprises parsing the textual document into one or more paragraphs, identifying, for each paragraph, one or more [synbols] symbols which indicate the presence of a quotation in the sentence, and determining, based on the identified symbols, quotations within the textual document.



29. (Amended) A method for automatically processing a textual document, comprising:
- parsing the text of the textual document into one or more paragraphs;
  - identifying, within each paragraph, one or more symbols which indicates the presence of a quotation text in the paragraph;
  - determining, based on the identified [symbols] symbols, a candidate quotation within the textual document and a potential source document of the quotation; and
  - matching the candidate quotation with quotation text in the potential source document to verify the source of the application.

### New Claims

Please add the following new claims to the above-identified patent application:

87. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 15.
88. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 19.
89. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 20.
90. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 27.
91. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 29.
92. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 30.

93. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 38.

94. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 40.

95. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 51.

96. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 52.

97. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 54.

98. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 57.

99. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 72.

100. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 75.

101. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 76.

102. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 78.

103. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 79.

104. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 80.

105. (New) A machine-readable medium comprising coded segments for causing execution of the method of Claim 86.

106. (New) A system for processing an electronic document, comprising:

- a text-identification module for identifying pieces of text in the document;
- a text-evaluation module for determining depth-of-treatment values for the identified pieces of text in the document, with each depth-of-treatment value indicating a significance of at least one of the identified pieces of text in the document;
- a text-association module for associating related electronic documents with identified pieces of text in the document, with each related electronic document chosen based on text adjacent the identified text; and
- a data-output module for outputting a data structure including at least one identified piece of text from the textual document, its corresponding document-treatment value, and its associated electronic documents.

107. (New) The system of claim 106, wherein:

- the text-identification module identifies pieces of text resembling legal citations;
- the text-association module associates legal headnotes with identified pieces of text in the document, with each headnote chosen based on text adjacent one of the identified pieces of text; and
- the data-output module outputs a data record including at least one identified piece of text from the textual document, its corresponding document-treatment value, and one or more associated legal headnotes.

108. (New) The system of claim 106, wherein:
- the text-identification module identifies pieces of text resembling quotations from other electronic documents;
  - the text-association module associates legal headnotes with identified pieces of text in the document, with each headnote chosen based on text adjacent one of the identified pieces of text; and
  - the data-output module outputs a data record including at least one identified piece of text from the textual document, its corresponding document-treatment value, and one or more associated legal headnotes.
109. (New) A system for automatically processing a textual document, comprising:
- a parser for parsing the text of the textual document into one or more paragraphs;
  - a quotation finder for finding one or more quotations and associated quotation-source identifiers within each paragraph; and
  - a quotation-source verifier for verifying whether each of the found quotations is associated with a correct quotation-source identifier.
110. (New) The system of Claim 109, wherein the quotation-source verifier comprises:
- means for generating a template for each of the found quotations, each template including a subset of words from the quotation and a textual position for each word in the subset of words; and
  - means for comparing each generated template to text in an electronic document identified by the quotation-source identifier associated with the corresponding found quotation.
111. (New) A document processing system comprising:
- a citation-identification module for identifying one or more citations in an electronic document;

a depth-of-treatment module for determining a depth-of-treatment value for each citation, the depth-of-treatment value indicating a degree of significance of the citation within the document; and

a depth-of-treatment-symbol generator for generating a symbol indicative of the degree of significance of each citation to the document.

112. (New) The system of claim 111, wherein the depth-of-treatment module comprises:

means for associating one of two or more citation types with each of the one or more citations;

means for determining for each citation a set of two or more occurrence numbers, each occurrence number indicating the number of times the citation occurred within the document as a respective one of the citation types;

means for determining a total number of occurrences of each citation in the document;

and

means for assigning a depth-of-treatment value to each citation, based on the total number of occurrences of the citation and its set of occurrence numbers.

113. (New) The system of 111, wherein one or more of the citations are legal citations.

114. (New) A document processing system comprising:

means for identifying one or more pieces of text in an electronic document; and

means for determining whether text in the document agrees semantically with text in another document associated with at least one of identified pieces of text.

115. (New) The system of claim 114, wherein each piece of text is a citation to another electronic document.

116. (New) The system of claim 114, wherein the electronic document is a legal article or judicial opinion piece and each identified piece of text is a citation to another electronic document.

117. (New) A system for automatically processing a textual document, comprising:  
a text-identification module for identifying citations in the document;  
a quotation finder for finding one or more quotations within the document; and  
a classifier for associating a subject matter classification with each citation piece text,  
based on text adjacent to the citation.

118. (New) The system of Claim 117, wherein the classifier associated a subject matter classification based on text adjacent to the identified piece of text and at least one of the found quotations.

119. (New) The system of Claim 117, wherein the subject-matter classifier comprises:  
means for identifying and collecting text adjacent to occurrences of each identified citation;  
means for searching a database for documents, based on the collected text and a quotation associated with each citation to generate one or more subject-matter-classification candidates and a belief score for each subject matter classification candidate; and  
means for associating one or more of the generated subject-matter-classification candidates with its corresponding citation, each associated subject-matter-classification having a belief score above a predetermined threshold.

120. (New) A system for automatically processing an electronic legal document, comprising:  
a citation-identification module for identifying one or more citations in an electronic document;

a depth-of-treatment module for determining a depth-of-treatment value for each citation, the depth-of-treatment value indicating a degree of significance of the citation within the legal document;

a classifier for associating a subject matter classification with each citation, based on text adjacent to the citation; and

a data-output module for outputting a data structure including at least one identified piece of text from the textual document, an indicator of its corresponding depth-of-treatment value, and its associated subject-matter classification.

121. (New) A system for automatically processing a textual document, comprising:
- a citation-identifier for identifying one or more citations in the document;
  - a quotation finder for finding one or more quotations and associated quotation-source identifiers within the document;
  - a quotation-source verifier for verifying whether each of the found quotations is associated with a correct quotation-source identifier;
  - a first text evaluator for determining whether text in the document agrees semantically with text in another document identified by at least one of the found citations;
  - a second text evaluator for determining a depth-of-treatment value for each found citation, the depth-of-treatment value indicating a degree of significance of the found citation within the legal document;
  - a classifier for associating a subject-matter classification with each found citation, based on text adjacent to the found citation and found quotations associated with the citation; and
  - a data generator for outputting a data structure including at least one found citation, an indicator of its corresponding depth-of-treatment value, its associated subject-matter classification, and information about whether text in the document agrees semantically with text in another document identified by the one found citation.



122. (New) A document processing system comprising:
- a text-identification module for identifying one or more pieces of text in an electronic document; and
  - a text-evaluation module for determining whether text in the document agrees semantically with text in another document associated with at least one of identified pieces of text.
123. (New) The system of claim 122, wherein the electronic document is a legal article or judicial opinion piece and each identified piece of text is a citation to another electronic document.
124. (New) The system of claim 122, wherein each piece of text is a citation to another electronic document.
125. (New) The system of claim 124, wherein the text-evaluation module comprises:
- means for identifying negative words in the document that are associated with each citation.
126. (New) A graphical user interface for facilitating human interaction with a database of legal documents, the interface comprising:
- a first interface screen including:
    - a first data window for displaying one or more portions of a first legal document containing one or more citations to other legal documents; and
    - a first control interface adjacent the data window, the first control interface having first user-selection means for indicating whether the first legal document includes at least one portion having compromised legal authority and for invoking display of a second interface screen.

127. (New) A machine-readable medium comprising coded segments for causing generation of the graphical user interface of claims 126.

128. (New) The graphical user interface of claim 126, wherein the second interface screen comprises:

a second data window for displaying one or more citations to other legal documents that reference the first legal document or other legal documents that the first legal document is otherwise related to; and

a second control interface adjacent the second data window, the second control interface having second user-selection means for affecting the number or type of citations displayed in the second data window; and  
third user-selection means for invoking display of a third interface screen.

129. (New) A machine-readable medium comprising coded segments for causing generation of the graphical user interface of claims 128.

130. (New) The graphical user interface of claim 128, wherein the second control interface further includes a visual indication of the number of citations in the second data window.

131. (New) The graphical user interface of claim 128, wherein the other documents that the first document is otherwise related to include documents for other judicial decisions relating to the same case as that for the first legal document.

132. (New) The graphical user interface of claim 128, wherein each displayed citation to other legal documents that reference the first legal document is displayed in association with a corresponding treatment label indicating how the legal document identified by the displayed citation treats the first document.

133. (New) The graphical user interface of claim 128, wherein at least one displayed citation is displayed in association with a quotation indicator that indicates the legal document identified by the one displayed citation quotes text from the first legal document.
134. (New) The graphical user interface of claim 128, wherein at least one displayed citation is displayed in association with a depth-of-treatment indicator that indicates how significant the first legal document is to the legal document identified by the one displayed citation.
135. (New) The graphical user interface of claim 128, wherein the third interface screen comprises:
- a third data window for displaying in a first mode one or more headnotes associated with the first legal document and for displaying in a second mode one or more subject-matter classifications associated with the first legal document; and
  - a third control interface adjacent the third data window, the third control interface including:
    - fourth user-selection means for switching the third data window between the first and second modes;
    - fifth user-selection means for selecting one or more headnotes; and
    - sixth user-selection means for selecting one or more legal subject-matter classifications; and
    - seventh user-selection means for re-invoking display of the second control screen, with the second display window responsive to the fifth or sixth user-selection means to limit display of citations based on the selected headnotes or the selected subject-matter classifications.
136. (New) A machine-readable medium comprising coded segments for causing generation of the graphical user interface of claims 136.

137. (New) A graphical user interface for facilitating human interaction with a remote database of legal documents, the interface comprising:
- a data window for displaying a first legal document;
  - first user-selection means for indicating whether the first legal document includes at least one portion having compromised legal authority and for causing the data window to display one or more citations to other legal documents that reference the first legal document; and
  - second user-selection means for affecting the number or type of citations displayed in the data window.
138. (New) The graphical user interface of claim 137, further comprising means, responsive to the first selection means, to display a visual indication of the number of citations in the data window.
139. (New) The graphical user interface of claim 138, wherein each displayed citation to other legal documents that reference the first legal document is displayed with a corresponding treatment indicator indicating how the legal document identified by the displayed citation treats the first document.
140. (New) The graphical user interface of claim 137, wherein at least one displayed citation is displayed with a quotation indicator that indicates the legal document identified by the one displayed citation quotes text from the first legal document.
141. (New) The graphical user interface of claim 138, wherein at least one displayed citation is displayed with a depth-of-treatment indicator that indicates how significant the first legal document is to the legal document identified by the one displayed citation.

142. (New) A machine-readable medium comprising coded segments for causing generation of the graphical user interface of claim 138.

143. (New) A graphical user interface for facilitating human interaction with a database of legal documents, the interface comprising:

- a data window for displaying one or more portions of a first legal document containing one or more citations to other legal documents; and
- at least one indicator for indicating how other legal documents have treated legal reasoning contained within the first legal document.

144. (New) The graphical user interface of claim 143, wherein the one indicator is displayed adjacent the data window.

145. (New) The graphical user interface of claim 143, wherein the indicator is displayed in a first color to indicate positive treatment by other legal documents and is displayed in a second color to indicate negative treatment by other legal documents.

146. (New) The graphical user interface of claim 143, wherein the indicator comprises user-selectable means for invoking display of one or more citations to other legal documents that reference the first legal document or other legal documents that the first legal document is otherwise related to.

147. (New) A graphical user interface for facilitating human interaction with a database of legal documents, the interface comprising:

- a data window for displaying one or more portions of a first legal document containing one or more citations to other legal documents; and
- means for indicating how other legal documents have treated legal reasoning contained within the first legal document.

148. (New) A machine-readable medium encoded with a plurality of data structures for facilitating human interaction with a database of legal documents, each legal document including one or more citations to other legal documents in the database, wherein each data structure is associated with one of the legal documents and comprises:

depth-of-treatment data associated with at least one citation within the one legal document, the depth-of-treatment data indicating significance of the one citation within the one legal document;

subject-matter data associated with at least one citation within the one legal document, the subject-matter data indicating or describing a legal point contained within a legal document identified by the one citation;

quotation-verification data indicating verification status of at least one quotation within the legal document; and

treatment data associated with at least one citation within the one legal document, the treatment data indicating how the one legal document treats a legal document identified by the one citation.

149. (New) The machine-readable medium of claim 148 wherein the depth-of-treatment data indicates

150. (New) The machine-readable medium of claim 148 wherein the subject-matter data

151. (New) The machine-readable medium of claim 148 wherein the treatment data indicates whether the one legal document agrees with the associated legal document.

152. (New) A machine-readable medium encoded with a plurality of data structures for facilitating human interaction with a database of legal documents, each legal document including one or more citations to other legal documents in the database, wherein each data structure is associated with one of the legal documents and comprises:

depth-of-treatment data associated with at least one citation within the one legal document, the depth-of-treatment data indicating significance of the one citation within the one legal document.

153. (New) The machine-readable medium of claim 152 wherein each data structure further comprises:

subject-matter data associated with at least one citation within the one legal document, the subject-matter data indicating or describing a legal point contained within a legal document identified by the one citation.

154. (New) The machine-readable medium of claim 153 wherein each data structure further comprises:

quotation-verification data indicating verification status of at least one quotation within the legal document.

155. (New) The machine-readable medium of claim 154 wherein each data structure further comprises:

treatment data associated with at least one citation within the one legal document, the treatment data indicating how the one legal document treats a legal document identified by the one citation.

156. (New) A machine-readable medium encoded with a plurality of data structures for facilitating human interaction with a database of legal documents, each legal document including one or more citations to other legal documents in the database, wherein each data structure is associated with one of the legal documents and comprises:

depth-of-treatment means, associated with at least one citation within the one legal document, for indicating significance of the one citation within the one legal document;



**PRELIMINARY AMENDMENT**

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subject-matter means, associated with at least one citation within the one legal document,  
for indicating or describing a legal point contained within a legal document  
identified by the one citation;  
quotation-verification means for indicating verification status of at least one quotation  
within the legal document; and  
treatment means, associated with at least one citation within the one legal document, for  
indicating how the one legal document treats legal points made in a legal  
document identified by the one citation.

**REMARKS**

The Examiner is invited to contact the below-signed attorney to discuss any questions  
which may remain with respect to the present application.

Respectfully submitted,

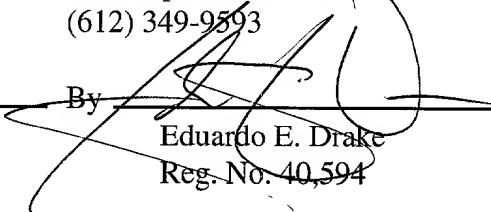
FORREST RHOADS ET AL.

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Date 2 May 2001

By

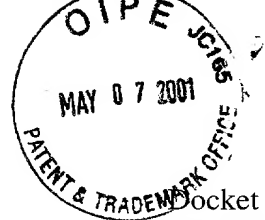
  
Eduardo E. Drake  
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 2d day of May, 2001.

Eduardo E. Drake  
Name

  
Signature





Socket No. 00962.011US2

WD # 372881.wpd

### Clean Version of Amended Claims

## SYSTEM AND METHOD FOR PROCESSING FORMATTED TEXT DOCUMENTS IN A DATABASE

Applicant: Forrest Rhoads et al.

Serial No.: 09/746,557

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4. (Amended) The system of Claim 3 further comprising means for identifying a quotation which is candidate for being associated with a citation in the textual document, and means for verifying a source document for each candidate quotation in the textual document to generate verified quotation information.
28. (Amended) The method of Claim 17, wherein said formatted text identification comprises parsing the textual document into one or more paragraphs, identifying, for each paragraph, one or more symbols which indicate the presence of a quotation in the sentence, and determining, based on the identified symbols, quotations within the textual document.
29. (Amended) A method for automatically processing a textual document, comprising:  
parsing the text of the textual document into one or more paragraphs;  
identifying, within each paragraph, one or more symbols which indicates the presence of a quotation text in the paragraph;  
determining, based on the identified symbols, a candidate quotation within the textual document and a potential source document of the quotation; and  
matching the candidate quotation with quotation text in the potential source document to verify the source of the application.